<u>Syllabus</u>

ISE101: Implementing & Troubleshooting Operating Systems Technology
Term 147

Credit Hours: 4
Prerequisites: PRE051, if applicable

Course Description

This course is designed to prepare students for CompTIA A+ Essentials Certification examination (220-802). Topics include operating system fundamentals; operating system architecture; comparison of operating systems; the boot process; installing, configuring, supporting, and upgrading operating systems; diagnosing and troubleshooting operating systems, and file systems. Students will also be introduced to networking, hard drive support, and Internet concepts and configurations as related to operating systems. At the conclusion of the course students will sit for the CompTIA A+ Essentials examination.

Instructor Contact Information

Instructor Name	Gerard Arthus
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Instructor Phone	Home 574-217-8726 Cell 631-335-5250

Course Length

The college evaluates each course in terms of quarter hours of credit. One unit of credit is usually equivalent to a minimum of ten academic instruction hours of lecture and examination, twenty hours of skill development, or thirty hours of externship, or a combination of the three. An academic instructional hour is fifty minutes.

This class will meet for the <u>equivalent of a minimum </u>of 55 instructional hours or as otherwise scheduled by the college and at least in conformance with this minimum and the Syllabus. As specified by the Method of Instruction section of this Outline, the instructor will ensure that the total class sessions presented consist of a minimum of 33 direct faculty instruction hours and a maximum of 22 appropriate classroom activity hours.

All course offerings require outside preparation time, which is approximately two hours per lecture instructional hour and/or one hour per skill development instructional hour, depending on the background, interest, abilities, and motivation of the individual student.

Course Objectives

By the end of this course, you should be able to:

1. Compare and contrast the features and requirements of various Microsoft Operating Systems.
2. Given a scenario, install and configure the operating system using the most appropriate method.
3. Given a scenario, use appropriate command line tools and operating system features and tools.
4. Given a scenario, use Control Panel utilities.
5. Setup and configure Windows networking on a client/desktop.
6. Explain the differences among basic OS security settings.
7. Explain the basics of client-side virtualization.
8. Apply and use common computer security prevention methods.
9. Compare and contrast common security threats.
10. Implement security best practices to secure a workstation.
11. Given a scenario, use the appropriate data destruction/disposal method.
12. Given a scenario, secure SOHO wired and wireless networks.
13. Explain the basic features of mobile operating systems.

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14. Given a mobile device, establish basic network connectivity and configure email.
15. Compare and contrast hardware differences in regards to tablets and laptops
16. Configure and execute mobile device synchronization.
17. Explain troubleshooting theory.
18. Given a scenario troubleshoot common operating systems related problems using the troubleshooting theory and best industry practices.

Gradebook

A student's performance in this course will be evaluated using a variety of factors listed below. Instructors must use a minimum of three (**homework, tests, and a final exam are required**), and it is recommended that instructors use all five areas in your evaluation.

The exact weight to be given to any particular area is determined by the instructor and will normally fall within the ranges listed below.

Area	Percentage for this Course	Suggested Range
Final Exam	25%	20 – 25%
Tests	30%	20 – 40%
Homework	15%	10 – 15%
Project/Research Paper	20%	20 – 25%
Class Participation	10%	10 – 15%
Total	**100%**	

Letter Grade	Points	Explanation
A	94-100	Excellent
B	84-93	Above Average
C	74-83	Average
D	64-73	Below Average
F	63 & Below	Failure

Textbook & Instructional Material

CompTIA Authorized Cert Guide, CompTIA A+ 220-801 and 220-802, by Mark Soper, David Prowse and Scott Mueller, Third Edition, Pearson Publishing, 2013

LabSim A+ Bundle (220-801 & 220-802), TestOut Corporation

The instructor might utilize additional instructional materials as provided by the publisher.

Course Outline

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Class Date: Week 1 – 12 July 2014 **Chapter 13: Installing and Upgrading Windows Devices**	Homework Due Date: By the end of the next week
In Class Activities	**Homework**
Do all of the Hands-on Labs in this week's chapters.

Do the quiz and the discussion forum posted on the Course Web-site for this week.

Document and record all work with appropriate screenshots (Using Greenshot screen-capture software; or the Snagit feature in Windows 7) and clear, concise, and understandable wording. Complete these assignments in a tutorial type format as if you were explaining the materials to someone who was unfamiliar with the information. | Do Homework for this week as listed on the Course Web-site for each Chapter in the Assigned Textbook. |
| Class Date: Week 2 – 19 July 2014 **Chapter 14: Using and Managing Windows** | Homework Due Date: By the end of the next week |
| **In Class Activities** | **Homework** |
| Do all of the Hands-on Labs in this week's chapters.

Do the quiz and the discussion forum posted on the Course Web-site for this week.

Document and record all work with appropriate screenshots (Using Greenshot screen-capture software; or the Snagit feature in Windows 7) and clear, concise, and understandable wording. Complete these assignments in a tutorial type format as if you were explaining the materials to someone who was unfamiliar with the information. | Do Homework for this week as listed on the Course Web-site for each Chapter in the Assigned Textbook. |
| Class Date: Week 3 – 26 July 2014 **Chapter 15: Troubleshooting and Maintaining** | Homework Due Date: By the end of the next week |

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Windows	
In Class Activities	**Homework**
Do all of the Hands-on Labs in this week's chapters. Do the quiz and the discussion forum posted on the Course Web-site for this week. Document and record all work with appropriate screenshots (Using Greenshot screen-capture software; or the Snagit feature in Windows 7) and clear, concise, and understandable wording. Complete these assignments in a tutorial type format as if you were explaining the materials to someone who was unfamiliar with the information.	Do Homework for this week as listed on the Course Web-site for each Chapter in the Assigned Textbook.
Class Date: Week 4 – 02 August 2014 *Chapter 16: Networking*	**Homework Due Date:** By the end of the next week
In Class Activities	**Homework**
Do all of the Hands-on Labs in this week's chapters. Do the quiz and the discussion forum posted on the Course Web-site for this week. Document and record all work with appropriate screenshots (Using Greenshot screen-capture software; or the Snagit feature in Windows 7) and clear, concise, and understandable wording. Complete these assignments in a tutorial type format as if you were explaining the materials to someone who was unfamiliar with the information.	Do Homework for this week as listed on the Course Web-site for each Chapter in the Assigned Textbook.
Class Date: Week 5 – 09 August 2014 *Chapter 5: Random Access Memory (RAM)*	**Homework Due Date:** By the end of the next week
In Class Activities	**Homework**

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Do all of the Hands-on Labs in this week's chapters. Do the quiz and the discussion forum posted on the Course Web-site for this week. Document and record all work with appropriate screenshots (Using Greenshot screen-capture software; or the Snagit feature in Windows 7) and clear, concise, and understandable wording. Complete these assignments in a tutorial type format as if you were explaining the materials to someone who was unfamiliar with the information.	Do Homework for this week as listed on the Course Web-site for each Chapter in the Assigned Textbook.
Class Date: Week 6 – 16 August 2014 **_Chapter 10: Mobile Devices_**	**Homework Due Date:** By the end of the next week
In Class Activities	**Homework**
Do all of the Hands-on Labs in this week's chapters. Do the quiz and the discussion forum posted on the Course Web-site for this week. Document and record all work with appropriate screenshots (Using Greenshot screen-capture software; or the Snagit feature in Windows 7) and clear, concise, and understandable wording. Complete these assignments in a tutorial type format as if you were explaining the materials to someone who was unfamiliar with the information.	Do Homework for this week as listed on the Course Web-site for each Chapter in the Assigned Textbook.
Class Date: Week 7 – 23 August 2014 **_Chapter 18: Operational Procedures and Communications Methods_**	**Homework Due Date:** By the end of the next week
In Class Activities	**Homework**
Do all of the Hands-on Labs in this week's chapters.	Do Homework for this week as listed on the Course

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	Web-site for each Chapter in the Assigned Textbook.
Do the quiz and the discussion forum posted on the Course Web-site for this week. Document and record all work with appropriate screenshots (Using Greenshot screen-capture software; or the Snagit feature in Windows 7) and clear, concise, and understandable wording. Complete these assignments in a tutorial type format as if you were explaining the materials to someone who was unfamiliar with the information.	
Class Date: Week 8 – 30 August 2014 **Chapter 8: *Customized PCs and Multimedia Devices***	**Homework Due Date:** By the end of the next week
In Class Activities	**Homework**
Do all of the Hands-on Labs in this week's chapters. Do the quiz and the discussion forum posted on the Course Web-site for this week. Document and record all work with appropriate screenshots (Using Greenshot screen-capture software; or the Snagit feature in Windows 7) and clear, concise, and understandable wording. Complete these assignments in a tutorial type format as if you were explaining the materials to someone who was unfamiliar with the information.	Do Homework for this week as listed on the Course Web-site for each Chapter in the Assigned Textbook.
Class Date: Week 9 – 06 September 2014 **Chapter 9: *Laptop and Notebook Computers***	**Homework Due Date:** By the end of the next week
In Class Activities	**Homework**
Do all of the Hands-on Labs in this week's chapters. Do the quiz and the discussion forum posted on the	Study for Final Examination and begin work on the Final Project.

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| <u>Course Web-site for this week.</u>

<u>Document and record all work with appropriate screenshots (Using Greenshot screen-capture software; or the Snagit feature in Windows 7) and clear, concise, and understandable wording. Complete these assignments in a tutorial type format as if you were explaining the materials to someone who was unfamiliar with the information.</u> | |

This course has an in-class final exam. Final exam date: 13 September 2014

Additional Final Exam Information: <u>The Final Exam and Project will be posted during the eight or ninth weeks of the Term. They must be completed by the Finals date, and the project will have an oral presentation during the Finals class.</u>

Method of Instruction

Instructional techniques must be appropriate, and at a collegiate level, to the specific goals and objectives cited above. Students and instructors must have a clear understanding of the goals and time requirements of this course, the nature of the course context, and method of evaluation.

This course has two distinct but related instructional phases. The first component constitutes a minimum of 33 direct faculty instruction hours. This component is the lecture series and provides instruction in theory, principles or practices of the course. The second component constitutes a maximum of 22 appropriate classroom activity hours. This component is the skill development phase of the course and provides students the opportunity to apply knowledge gained in the lecture series. Method of instruction must fulfill the intended learner outcomes and competencies stated in the course goals and objectives and are appropriate to the capabilities of the students. For career oriented courses, the instructor must demonstrate that an effective relationship exists between curricular content and current practices in the field.

Additional Class Comments

Go to http://www.openeducation.org/moodle to use the Web-Assisted site for this course and *WS801* CompTIA A+ Hardware Certification (Tests 220-801 and 220-802), which you will also find in the Open Education Portal. There will be workshops held at least once per week throughout the term in order to study for the two Comptia A+ Exams.

Quizzes and discussion forums will be completed on-line at this site. This site will have a detailed explanation of all of the course requirements, materials, readings, videos.

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